

WEATHER MAGAZINE

May/June ISSUE, 2002

Abstract

A state that ranks 42nd in size, Maryland has taken an inordinate number of tornado hits--two of them deadly. On Sep 24, 2001, an F3 twister took the lives of two students as it ripped through the University of Maryland at College Park. On Apr 28, 2002, an F4 tornado killed five people and devastated the town of La Plata. During the first half of May 2002, three different twisters and several downbursts pounded various parts of the state.

MAY HIGHLIGHT

Twisters Claw Maryland

by James Foster

JAMES FOSTER is a lifelong Maryland resident and a climatologist in the Hydrological Sciences Branch at NASA's Goddard Space Flight Center in Greenbelt, Maryland.

Many of us can recall our grandparents regaling us with stories about what the weather was like when they were growing up. Gramps would say something like, "Back in '32, the winter was so long that I had to put snowshoes on both me and the mule to plow the north 40."

We listened in amazement and wondered what it must have been like back then. Sometimes you've got to wonder if it really was that much worse. Chances are, Gramps was remembering a cluster of bad weather events that made the extremes seem even more extreme.

Take the past couple of years in Maryland, for example. A state that ranks 42nd in size, Maryland has taken an inordinate number of tornado hits—two of them deadly. Almost a year ago, on September 24, 2001, an F3 twister took the lives of two students as it ripped through the University of Maryland at College Park.

And this past spring, on April 28, an F4 tornado killed five people and devastated the town of La Plata, 30 miles south of Washington, D.C. If that wasn't bad enough, during the first half of May, three different twisters and several downbursts pounded various parts of the state.

Maryland residents have become more attuned to just how dangerous tornadoes can be and are taking tornado warnings more seriously, sometimes to the point of dramatically overreacting. In fact, about a week after the La Plata tornado occurred, an adjacent county closed schools when a tornado watch was issued.

The La Plata tornado was a product of a supercell thunderstorm that formed ahead of a cold front pushing east across the Ohio Valley. April 28 was

warm and very humid across the mid-Atlantic. Dew points in Washington, D.C., were in the low 70s (°F), and temperatures rose to the upper 70s once the sun emerged after heavy morning rain. Wet ground, moist air, and warm temperatures helped to fuel the development of afternoon thunderstorms. Moreover, the jet stream, positioned over the mid-Atlantic region, acted to intensify the developing storms.

An energetic cold front can act as a triggering mechanism for tornado formation if a large area of moisture is surging north from the Gulf of Mexico and if a vigorous jet stream is positioned overhead. Because of the very unstable atmosphere, the National Weather Service issued tornado watches and severe thunderstorm warnings well before the first funnel cloud was sighted.

Even by "Tornado Alley" standards, the La Plata tornado was big. After demolishing La Plata, it hit Prince Frederick, Maryland, and then hopscotched across the Chesapeake Bay onto Maryland's Eastern Shore. The storm cell associated with the deadly La Plata tornado persisted all the way from the Appalachians to the Atlantic Ocean.

Maryland's most deadly tornado disaster also occurred near La Plata 76 years ago when a schoolhouse was demolished and more than a dozen children were killed.

While little Maryland has recently been battered by a number of unwelcome twisters, most of the rest of the country has dodged them. In fact, for the last two years and thus far this year, the number of reported tornadoes nationwide has been below the 30-year mean.

So, why then has Maryland had to deal with more than its share of tornadoes? Basically, it's just by chance that the cast of meteorological characters that must appear on stage at the same time to produce the fiercest winds on Earth has done so with some regularity in Maryland. The show is usually seen in the southern Plains and the Midwest, but over the past year, it went on the road to the east. As always, the reviews were dreadful. The bottom line is that Maryland needn't worry about becoming a new "Tornado Alley,"

though it may have seemed so recently.

Nonetheless, I suppose in 50 years, today's kids will be telling their grandchildren what it was like when they were young sprouts. "Back in '02, you didn't even have to till your fields in the spring; the twisters came so thick and fast, you'd just wait for one of them to plow up the ground for you."

An aerial view of the 10-mile swath that the tornado left behind in La Plata, Maryland, in late April. The remains of La Plata appear at the left, where the tornado path crossed the north-to-south Route 301.

COURTESY OF EO-1 SCIENCE TEAM, NASA GODDARD SPACE FLIGHT CENTER